Sibyl Athimattathil

Water, Energy, and Waste

Fall 2016- Final

12/3/16

Topics: Wind Energy, Renewable Resources

Objective: Students will be able to identify and define wind energy as a renewable resource and make a windmill model to illustrate their knowledge of how wind energy works

Standards:

**CCLS Standard 1**: Analysis, Inquiry, and Design  
Students will use mathematical analysis, scientific inquiry, and engineering design, as appropriate, to pose questions, seek answers, and develop solutions.

**CCLS Standard 4**: Science  
Students will understand and apply scientific concepts, principles, and theories pertaining to the physical setting and living environment and recognize the historical development of ideas in science.

Materials:

* Energy Island- Allan Drummond
* Various collected materials (paper/plastic waste)
* Glue/Tape
* Problem/Solution T-Chart

Procedure:

1. Teacher will read aloud *Energy Island* by Allan Drummond (This narrative tells the true story of a community on a small island in Denmark that worked together for energy independence.  The people on the island are reluctant to change their ways at first, but then a power outage convinces them to try new sources of energy!)
2. After reading the text aloud to students, have a group discussion or mini-discussions in small groups.

* What other forms of renewable energy did the residents of Sanso use?
* Why did the residents choose not to rely on fossil fuels?
* What type of renewable energy is most available in your region?  What could your community do to reduce its reliance on fossil fuels?

1. Students will be given various collected materials (plastic & paper waste) and asked to create a windmill. All projects must rotate when wind is blown.

Assessment:

Students will be given a problem and solution t- chart to complete.